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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	09/997,616	PARDO ET AL.
	Examiner	Art Unit
	PETER CHOI	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 48* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-13, 48* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

1.   The following is a **NON-FINAL** office action upon examination of application

number 09/997,616.

Response to Amendment

2.   In the amendment filed April 23, 2008, claim 1 has been amended, and claim 48

has been added. Claims 1-13 and 48 are pending.

Response to Arguments

3.   Applicant's arguments filed April 23, 2008 with respect to Kocur have been fully

considered but they are not persuasive.

Applicant argues that Wetzer does not disclose anything underlying the tasks

that are used for scheduling.

The Examiner respectfully disagrees. For a task, Wetzer determines the resource

requirements, the expected resources available for a specified time window

[Paragraphs 7, 16], which is used in developing a preliminary resource plan for the

maintenance task to be performed within a specified time window. Wetzer determines

the resource requirements for each maintenance task, including labor (in terms of the

hours of labor required, as well as skill specialty and necessary certifications of the

technician required to perform the maintenance task), materials, tools, facilities, test

fixtures, test devices, diagnostic equipment, test equipment, computer-based support

systems, end item location, task precedence, and time span for the task [Paragraph 23].

Wetzer also monitors the individual technicians that are available with definition of their

skill sets, certification, crew assignments, component or raw material supply profiles,

including inventory status and material availability [Paragraphs 26-27]. Thus, Wetzer

does indeed teach the consideration of resource and time availability in scheduling a

task.

Applicant argues that Kocur fails to teach or suggest that resources can be

assigned to multiple proposals having the same time availability.

The Examiner respectfully disagrees. The Examiner notes that a plurality of

proposals are created *prior* to scheduling of the job; thus, a single resource may be

"assigned" to a different job in each proposal within a common time interval. For

example, in Proposal A, a diagnostic computer may be assigned to Job X at 3-5PM,

whereas in Proposal B, the same diagnostic computer may be assigned to Job Y at 4-

5PM. In Kocur, workers may be assigned to multiple projects during a workday **(a set of

work-projects has been assigned to each worker)**; in other words, a worker may be

assigned to Job X in the morning, and Job Y in the afternoon. Kocur also teaches the

step of identifying every project that a worker is eligible to be assigned to, based on

skills required of the project and skills possessed by the worker and time constraints

**(Associated with each work-project data record is a work-project node. Similarly,

each worker data record has an associated worker node record. The graph links a**

work-project data record to its associated work-project node and the worker data record to the worker node. Further the graph links work-project nodes with worker nodes, representing workers eligible to perform the work-project. That is, it links all work projects to each eligible worker. In order for a worker to be eligible for a work-project, the work-project and the worker must have matching work groups, work types, skills, known buildings, work centers, and the worker must be on duty during the work-project's dispatch window. Further, the worker must have enough hours left in his or her tour of duty to complete the work project) [Column 6, lines 21-35]. Thus, the Examiner asserts by creating a graph that identifies all the projects for which a worker is eligible to be assigned to, Kocur does indeed teach creating a plurality of proposals wherein a resource can be included in any number of the plurality of proposals during a same time availability.

4.   Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Specifically, Applicant argues that:

- Wetzer does not allow the selection of a time to start a job, but requires that a task be performed during a specific time interval, and further that tasks are selected based on a dependency of a related job and not the desired appointment time

- Kocur does not teach receiving a desired start time

5.   Applicant's arguments with respect to the newly amended features of claims 1
and newly introduced claim 48 have been considered and are addressed in the updated
Office Action below. Specifically, Applicant argues that:

- the services, time dependencies, and resources be determined in advance
  of receiving the time input, whereas Wetzer teaches that the time specified
  for the tasks is received at the time the maintenance task database is
  established; and

- Wetzer cannot teach both services and jobs, inasmuch as the claims
  recite that a job includes multiple services.

Official Notice

6.   As explained in the previous Office Action mailed January 23, 2008, as a result of
the untimely and improperly challenged Official Notice, per MPEP 2144.03(c), these
statements are taken as admitted prior art because no traversal of this statement was
made in the subsequent response. Specifically, it has been taken as prior art that:

- It is old and well known in the art to associated appointments by customer

- It is old and well known in the art to associated blocks of time with the job
  scheduled to be performed during said block of time

- It is old and well known in the art to assign different priorities to resources

- It is old and well known in the art to conserve valuable and scarce resources by
  substituting less valuable and more plentiful resources

In the previous Office Action mailed April 19, 2007, notice was taken by the

Examiner that certain subject matter is old and well known in the art. Per MPEP

2144.03(c), these statements are taken as admitted prior art because no traversal of

this statement was made in the subsequent response. Specifically, it has been taken as

prior art that:

- It is old and well known in the art to eliminate infeasible proposals, such as those

  who cannot be fulfilled by available resources

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

8.   Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. .

Claims 1-13 are rejected under 35 U.S.C. 101 based on Supreme Court

precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is

that a § 101 process must (1) be tied to another statutory class (such as a particular

apparatus) or (2) transform underlying subject matter (such as an article or materials) to

a different state or thing. Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook,

437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane

v. Deener, 94 U.S. 780,787-88 (1876).

An example of a method claim that would <u>not</u> qualify as a statutory process

would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory

process, the claim should positively recite the other statutory class (the thing or product)

to which it is tied, for example by identifying the apparatus that accomplishes the

method steps, or positively recite the subject matter that is being transformed, for

example by identifying the material that is being changed to a different state. Dependent

claims 2-13 merely add further details of the scheduling considerations recited in claim

1 without including any tie to another statutory category nor any transformation of

subject matter into a different state or thing.

Here, applicant's method steps, fail the first prong of the new Federal Circuit

decision since they are not tied to another statutory class and can be performed without

the use of a particular apparatus. Thus, claims 1-13 are non-statutory since they may be

preformed within the human mind.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

11.   Claims 1-6 , 8-12 and 48 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wetzer et al. (PGPub 2004/0162811) in view of Kocur (US Patent

#5,913,201) and Jacobs (US Patent #7,346,531).

        As per claim 1, Wetzer et al. teaches a method for scheduling appointments to

do a particular job, comprising the steps of:

        (a)   for each job comprising a plurality of services performed by one or more

resources **{the job being maintenance/repair/overhaul of equipment, comprising a**

plurality of maintenance tasks} [Paragraph 7] for which an appointment is to be

scheduled using the method, receiving operator input specifying each service, a time

dependency of each service needed to perform each job, and a resource dependency

of each service needed to perform each job, wherein the time dependency comprises a

length of time required to perform the service and related dependencies on other

services and the resource dependency comprises a listing of the resources required to perform the service **(establish a maintenance task database comprising a description of maintenance tasks to be performed within a specified time window for the end item based on the configuration; determining the resource requirements for each maintenance task in the maintenance task database. These resource requirements include at least one of labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task)** [Paragraphs 21, 23];

(b)   receiving operator input specifying a time availability of each resource that can be used to perform each service needed to perform the job **(determining the expected resources available 18 for the specified time window; determining the resource requirements for each maintenance task in the maintenance task database. These resource requirements include at least one of labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task. These resource requirements may be defined by the component manufacturers or determined by past practice, or determined by other known means. The labor requirements include not only the hours of labor required but as well as the skill specialty required and any necessary certification of the technician required to perform the maintenance task)** [Paragraphs 16, 23];

(c)   at a time before the appointment to do the particular job is actually scheduled, determining the time dependency of each service **(determining the resource requirements for each maintenance task in the maintenance task**

database. These resource requirements include at least one of task precedence with respect to other tasks, and time span for the task) [Paragraph 23];

(e)   selecting one of a plurality of proposals that are associated with the particular job, that was created, to make an appointment for doing the particular job **{allowing the user to select the time window during which to perform the first job leads to the ultimate selection of the "optimal" plan, as defined by parameters such as start time}** [Paragraph 33];

(f)   associating the corresponding resources required for the selected proposal with the appointment and identifying the resources as being unavailable **(After optimizing the resource plan, the next step 28 is to create allocation transactions or assignments. The allocation transactions are created to assign the resources to the specific end item for the specific maintenance task during the specific time window. Preferably the allocation transaction also initiates another step 32 for generating work orders. The work orders preferably include detailed instructions to a maintenance technician of a maintenance task to be performed, when it is to be performed, and all the resources that have been allocated to complete the task)** [Paragraph 34]; and

(g)   automatically **{software tools are used to perform the optimization; computer software automates the optimization process}** revising the plurality of proposals in response to said one of the plurality of proposals being selected to make an appointment for doing the particular job **(After the preliminary resource plan is developed, the next step 26 is to optimize that resource plan. The optimization**

may come up with alternatives that require human intervention to select specific options that are desired, which will then cause the optimizer to reiterate back to the resource planning tools to re-execute the schedules) [Paragraphs 31-32].

While Wetzer et al. provides software tools, it does not explicitly disclose that said software tools are used in automatic revision of proposals. However, it was known at the time of the invention that merely providing an automated way to replace a well-known activity which accomplishes the same result is not sufficient to distinguish over the prior art. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). Furthermore, it is well settled that it is not "invention" to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result. In re Venner, 120 USPQ 192.

Although not explicitly taught by Wetzer et al., Kocur teaches:

(c)   at a time before the appointment to do the particular job is actually scheduled **(the ADS system begins operation at a time designated by the user usually in advance of the start of actual daily operations, to allow time for the first plan, to be computed and written to memory before it is actually used) {the first plan occurs prior to optimization, the plan being an assignment of workers to work-projects; assignment and writing of the plan to memory occurs after optimization}** [Column 4, lines 50-53, claim 1c], automatically creating a plurality of proposals that specify when each job might be scheduled during a defined time period,

the plurality of proposals being created as a function of the time availability of each

resource that can be used to perform each service needed to perform each job],

wherein at least one resource and at least one service can be included in any number of

the plurality of proposals at a same time availability **(The Automated Dispatch System**

builds a graph and associated data structures during its first execution of the day

in processing block 102. Subsequent dispatch executions create a new graph

when incorporating new work-project data record and worker information.

Associated with each work-project data record is a work-project node. Similarly,

each worker data record has an associated worker node record. The graph links a

work-project data record to its associated work-project node and the worker data

record to the worker node. Further the graph links work-project nodes with

worker nodes, representing workers eligible to perform the work-project. That is,

it links all work projects to each eligible worker; some work-projects are divided

among two or more workers; a set of work-projects has been assigned to each

worker) {the graph represents possible assignments of workers to work-projects,

i.e., proposals} [Column 6, lines 17-29, Column 14, lines 29-30, 45-46], each proposal

indicating a time instance at which each job can be initiated during the defined time

period, wherein each job can have a plurality of associated proposals;

(e)   based upon the desired time for starting the appointment to do the

particular job, automatically selecting one of the plurality of proposals that are

associated with the particular job that was created prior to the input specifying a desired

time for starting the appointment, to make an appointment for doing the particular job

{by entering the desired start time, i.e., parameters t_{i1}, t_{i2}, t_{j1}, and t_{j2}, the linear

programming formulation can be optimized, resulting in the selection of a

proposal}

(f)   associating the corresponding resources required for the selected

proposal with the appointment and identifying the resources as being unavailable

(Referring to processing block 106 new input data is received into the system.

This new input may be in the form of changes in worker availability. Referring to

process block 107, the linear programming graph described above is modified to

reflect these changes) [Column 6, lines]

(g)   automatically revising the plurality of proposals in response to said one of

the plurality of proposals being selected to make an appointment for doing the particular

job, including revising proposals for which resources are no longer available due to

making the appointment for doing the particular job **(New inputs dictate that an**

updated plan be created. This new input may be in the form of a new work-project

to be accomplished, the completion of work-projects, or changes in worker

availability. An updated dispatch plan is created, reflecting the changes) [Column

6, lines 54-62].

Both Wetzer et al. and Kocur are directed towards optimizing work scheduling to

efficiently assign work based on resource availability and are analogous references in

the art of scheduling. Therefore, it would have been obvious to one of ordinary skill in

the art at the time of invention to modify the teachings of Wetzer et al. to include the

steps of (c)-(g), because doing so allows Wetzer et al. to efficiently and effectively schedule job appointments by examining and reexamining the requirements of diverse assignments and properly and efficiently scheduling available resources whose availability is dynamic, resulting in the optimizing of the deployment of resources for tasks in a specified time window based on resource requirements and resource availability, which is a goal of Wetzer et al. [abstract].

Further regarding (g), the Wetzer-Kocur combination does not explicitly teach the step of eliminating any proposals that cannot be revised due to resources no longer being available. However, it has been admitted as prior art, as a result of untimely and/or improperly challenged Official Notice, that it is old and well known in the art to eliminate infeasible proposals, such as those who cannot be fulfilled by available resources. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of the Wetzer-Kocur combination to include the step of eliminating any proposals for which job times cannot be recalculated, because doing so results in the Wetzer-Kocur combination considering only feasible proposals, further resulting in efficient and effective scheduling of job appointments by examining and reexamining the requirements of diverse assignments and properly and efficiently scheduling available resources whose availability is dynamic, resulting in the optimizing of the deployment of resources for tasks in a specified time window based on resource requirements and resource availability, which is a goal of Wetzer et al. [abstract].

Although not explicitly taught by Wetzer et al. or Kocur, Jacobs teaches:

(a)   prior to receiving input regarding a desired time for starting the particular

job, wherein the particular job is comprised of a plurality of services performed by one or

more resources **(A complex work order is a task to be performed by one or more**

members of a work force, which requires two or more related work orders to be

completed typically in a prescribed or preferred order) [Column 2, lines 63-66];

(d)   receiving the input specifying a desired time for starting the appointment to

do the particular job **(The data structure provided herein relates the work orders of**

a complex work order as a set of sub-orders that are further related to one

another by information common to those sub-orders and by precedence criteria

that identify and relate the start and/or completion times of one sub-order with

respect to another; Other processes include communicating a proposed start

time for commencing work on a member sub-order.... A typical start time

proposal comes from a technician; Typical functions of a WMS include, but are

not limited to... scheduling appointment windows and start times for completing

work orders,... receiving input regarding the start and completion time of work

orders) [Column 3, lines 23-29, Column 4, lines 22-28, Column 8, lines 29-41];

Jacobs is analogous to the Wetzer-Kocur combination in that resources are

scheduled/assigned to jobs based on resource availability, time dependency and task

precedence relationships. Therefore, it would have been obvious to one of ordinary skill

in the art at the time of invention to modify the Wetzer-Kocur combination to include the

steps of considering jobs comprising a plurality of services, and receiving input
specifying a desired start time for a job, as taught by Jacobs, as selection of a start time
impacts worker availability based on the time available and length of their tour of duty,
as well as task precedence constraints, thereby enhancing the ability of the Wetzer-
Kocur combination to optimize a dispatch plan and assign workers to jobs based on
resource and worker availability.

As per claim 2, neither Wetzer et al. nor Kocur explicitly teaches the method of
claim 1 further comprising the step of associating the proposal with a customer for
whom the job is to be done.

However, it has been admitted as prior art, as a result of untimely and/or
improperly challenged Official Notice, that it is old and well known in the art to associate
appointments by customer. It would have been obvious to one of ordinary skill in the art
at the time of invention to modify the teachings of Wetzer et al. to include the step of
associating proposals with customers, because the resulting combination would enable
the service provider to provide personalized service to the scheduled customer, rely
upon previous historical experiences with said customer to become familiarized with
required work during the scheduled appointment, and provide contact and billing
information for services rendered to said customer, resulting in the optimizing of the
deployment of resources for tasks in a specified time window based on resource
requirements and resource availability, which is a goal of Wetzer et al. [abstract].

As per claim 3, Wetzer et al. teaches the method of claim 1, wherein the step of automatically creating the plurality of proposals comprises the steps of automatically searching each of the services needed to perform the job to identify an availability of each block of time that is:

(a)   sufficient in duration to perform the service **(the time span required for each maintenance task may relate to the task precedence with respect to other tasks and may relate to the sequence in which tasks are performed {i.e., is there enough time to perform each maintenance task in the time span})** [Paragraph 26]; and

(b)   for which resources required to perform the service are available **(determine the resource available for a specified time window)** [Paragraph 27].

As per claim 4, Wetzer et al. does not explicitly teach the method of claim 3, further comprising the step of associating a job identification with each block of time that is thus identified.

However, it has been admitted as prior art, as a result of untimely and/or improperly challenged Official Notice, that it is old and well known in the art to associate blocks of time with the job scheduled to be performed during said block of time. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of associating blocks of time with

scheduled jobs, because the resulting combination enables service providers to account

for scheduled work and avoid overbooking of resources (for example, assigning a

machine to perform two jobs at once, or assigning an employee to service multiple

widgets at the same time, or to schedule an employee while they are unavailable) ,

resulting in the optimizing of the deployment of resources for tasks in a specified time

window based on resource requirements and resource availability, which is a goal of

Wetzer et al. [abstract].

As per claim 5, Wetzer et al. teaches the method of claim 3, further comprising

the step of splitting a block of time into pieces, to define a proposal having a split time

interval in which the job can be performed **(If a first task requires the completion of a**

second task before performing the first task, the system may identify several time

windows within which the second task has already been planned) [Paragraph 33].

As per claim 6, Wetzer et al. does not explicitly teach the method of claim 1,

further comprising the step of receiving operator input assigning different priorities to at

least some of the resources, so that a resource assigned a lower priority is used prior to

a resource assigned a higher priority, when selecting said one of the plurality of

proposals to schedule the appointment.

However, it has been admitted as prior art, as a result of untimely and/or

improperly challenged Official Notice, that it is old and well known in the art to assign

different priorities to resources. It has also been admitted as prior art, as a result of
untimely and/or improperly challenged Official Notice, that it is old and well known in the
art to conserve valuable and scarce resources by substituting less valuable and more
plentiful resources. It would have been obvious to one of ordinary skill in the art to
modify the teachings of Wetzer et al. to include the step of assigning different priorities
to resources, because the resulting combination would enable that said resources are
managed effectively to meet the demands of different users with different priorities by
avoiding monopolization of resources and resource starvation while conserving scarce
and valuable/important resources (higher priority resources) by substituting less
valuable and more plentiful resources (lower priority resources) for earlier consumption,
resulting in the optimizing of the deployment of resources for tasks in a specified time
window based on resource requirements and resource availability, which is a goal of
Wetzer et al. [abstract].

As per claim 8, Wetzer et al. teaches the method of claim 1, wherein the step of
selecting one of the plurality of proposals comprises the step of balancing usage of the
resources that can be used to perform the services needed to perform the job **(the
availability of the end item during a specific time window is a planning constraint
that must be balanced between the operational demands the assets and the need
for the maintenance activity)** [Paragraph 27].

As per claim 9, Wetzer et al. teaches the method of claim 1, wherein the a plurality of the services needed to perform the job are carried out sequentially, with a first service being completed before a second service can be begun **(the time span required for each maintenance task will relate to the task precedence with respect to other tasks and this includes the relationship between waiting for the completion of one task before being able to start a second task)** [Paragraph 26].

As per claim 10, Wetzer et al. teaches the method of claim 1, wherein a plurality of the services needed to perform the job are carried out in parallel, with a first service being completed while a second service is also being done **(the time span required for each maintenance task will relate to the task precedence with respect to other tasks and this includes whether the tasks may be completed concurrently)** [Paragraph 26].

As per claim 11, Wetzer et al. teaches the method of claim 1, wherein the step of automatically creating the plurality of proposals is completed at a time before the step of automatically selecting is carried out **{resource plans are developed (step 24) and optimized (step 26) prior to the creation of allocation assignments (step 30) and work orders (step 32). Until the optimized resource plan is developed, the reiterative optimization process yields a plurality of proposals. The optimization process then automatically selects the optimal proposal to schedule the job}** [Figure 1, Paragraph 16].

As per claim 12, Wetzer et al. teaches the method of claim 1, further comprising

the step of repeating steps (a) through (b) for each of a plurality of additional jobs,

thereby scheduling appointments for the additional jobs **(identifying newly discovered**

maintenance tasks required to be performed within the specified time window,

updating the resource plan and creating additional allocation transactions;

identifying newly discovered maintenance tasks required to be performed within

the specified time window, determining the additional resources required for the

newly discovered maintenance tasks, updating the optimization of the resource

deployment incorporating the additional resources required, and creating

additional allocation transactions) [Claims 6, 13].

Claim 48 recites substantially similar limitations already addressed by the

rejection of claim 1 above; therefore, the same rejection applies.

Further, Kocur teaches the step of searching each of the services needed to

perform the particular job to identify an availability of each block of time that is sufficient

in duration to perform each service and for which resources required to perform the

service are available **(Associated with each work-project data record is a work-**

project node. Similarly, each worker data record has an associated worker node

record. The graph links a work-project data record to its associated work-project

node and the worker data record to the worker node. Further the graph links

work-project nodes with worker nodes, representing workers eligible to perform the work-project. That is, it links all work projects to each eligible worker. In order for a worker to be eligible for a work-project, the work-project and the worker must have matching work groups, work types, skills, known buildings, work centers, and the worker must be on duty during the work-project's dispatch window. Further, the worker must have enough hours left in his or her tour of duty to complete the work project) [Column 6, lines 21-35].

12.   Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzer et al. in view of Kocur and Jacobs as applied to claim 1 above, and further in view of Crici et al. (PGPub 2005/0027580).

As per claim 7, although not explicitly taught by Wetzer et al. or Kocur, Crici et al. teaches the method of claim 1, wherein the step of specifying the time availability of each resource includes the step specifying any block of time in which a resource is unavailable to perform a service during the defined time period **(The physician can block out periods of time for which no appointments can be scheduled; The system provides the service provider with the ability to continually modify the appointment schedule in order to block out additional slots of time or to make time slots available; The service providers can change the appointment schedules in any way desired, for example, to block out days or sections of time when they are not available)** [Paragraphs 7, 16].

Wetzer et al., Kocur, Jacobs and Crici et al. are all directed towards scheduling services; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combined teachings of Wetzer et al., Kocur and Jacobs to include the step of specifying blocks of time in which resources are unavailable because the resulting combination would enable users to assess the best time to be serviced by identifying time blocks in which resources are available, further enabling Wetzer et al. to accomplish its goal of determining the expected resources available for a specified time window as part of the process of scheduling tasks [Paragraph 16].

As per claim 13, although not explicitly taught by Wetzer et al. Kocur, or Jacobs, Crici et al. teaches the method of claim 1, further comprising the step of receiving input instructing an appointment to be canceled, and in response thereto, automatically revising the plurality of proposals, to accommodate changes in the time availability of resources that were previously required to perform said one of the plurality of proposals corresponding to the appointment that was canceled, making the resources available for other appointments **(allow a potential service receiver to indicate a preference for a time slot which is already reserved and, if that time slot subsequently becomes available prior to the appointment, for example, due to a cancellation, the second service receiver is notified)** [Paragraph 12].

Wetzer et al., Kocur, Jacobs and Crici et al. are all directed towards scheduling services; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combined teachings of Wetzer et al., Kocur and Jacobs to include the step of enabling appointment cancellation because the resulting combination would make the corresponding time blocks available for scheduled service by prospective customers, further enabling Wetzer et al. to establish the maintenance task database of tasks to be performed within a specified time window, and determine the expected resources available for a specified time window as part of the process of scheduling tasks [Paragraph 16], and optimize the deployment of resources for tasks in a specified time window based on resource requirements and resource availability, which is a goal of Wetzer et al. [abstract].

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references discuss task scheduling based on available and necessary task personnel and resources, as well as task and resource dependency:

- Miller (US Patent #6,101,481)

- Verhaegh et al. (USPGPub 2002/0156669)

- Mahapatro (US Patent #7,379,888)

- Richardson et al. (US Patent #7,212,986)

- Munoz et al. (US Patent #7,149,700)

- Newbold (US Patent #7,089,193)

- Vos et al. (US Patent #6,944,630)

- Clark (US Patent #6,889,196)

- Smith et al. (US Patent #6,609,100)

- Fox (US Patent #5,890,134)

- Powell et al. (USPGPub 2002/0065700)

- Mozayeny et al. (USPGPub 2002/0035493)

- Testa (US Patent #7,246,075)

- Brodersen et al. (US Patent #6,850,895)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER CHOI whose telephone number is (571)272-6971. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Van Doren can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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July 14, 2008

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